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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/078,395	02/21/2002	Hiroki Tajima	03500.016203	5613

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EXAMINER
NGUYEN, JUDY

ART UNIT PAPER NUMBER
2861

DATE MAILED: 11/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/078,395

Applicant(s)

TAJIMA ET AL.

Examiner

Judy Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 13 and 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 14-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Claims 13 and 18 withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 5. Please note that although applicant has indicated that claims 1-17 read on elected species. The examiner noted that the elected species does not include the ink jet head being held within a tray in an inclined condition as recited in claim 13. Hence, claim 13 is also being withdrawn as set forth above.
2. Applicant's election with traverse of Group I, Species I in Paper No. 5 is acknowledged. The traversal is on the ground that the two groups of claims are not so different as would require a burden on the examiner. Applicant also indicated that classification of Group I is an indented subclass of Group II. Hence, there is a close technical relationship between the Groups. This is not found persuasive. First, applicant has provided no evident to support the alleged insignificant different between the two groups. Second, burden of examination does not base solely on classification. The requirement is still deemed proper and is therefore made FINAL.

Claim Objections

3. Claim 2 is objected to because of the following informalities:
- Claim 2: "form" (page 45, line 27) should be --from--.
 - Claim 6: "said member" lacks proper antecedent basis.
 - Claim 9: "capillary" (page 47, line 14) should be --capillary--.

Appropriate correction is required.

Drawings

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, "said liquid absorbing member (which defines in claim 2 as being disposed in said elastic cap) is urged against an atmosphere release port of said atmosphere releasing members" (claim 12) must be shown or the feature canceled from the claim. No new matter should be entered. Please note that the drawings do not illustrate any liquid absorbing member that is being disposed in the elastic cap **and also** urged against an atmosphere release port of said atmosphere releasing members.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 12 and 14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification does not describe in such a way that enable one skilled in the art to make a structure that have a single liquid absorbing member being disposed in an elastic cap and also urged against an atmosphere release port of said atmosphere releasing members as recited in claim 12. Claims 13 and 14 are depended on claim 12. Accordingly, they are also rejected under 112, first paragraph.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-12, 14-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1: The claim recites a "**storing structure** for storing an ink jet head". It continues then with what comprises in the head and follows by a wherein statement. The claim, however, does not define what comprises in the claimed storing structure. Hence, it is unclear whether the claim is directed to a **storing structure** for storing an ink jet head **or the ink jet head** itself. Therefore, the metes and bounds of the claimed invention cannot be clearly ascertained.

Claim 2: This claim is similar to claim 1. Hence, it suffers the same problem as set forth above with respect to claim 1.

Claim 5: It is unclear what the different between an insertion portion of a member and a communication pipe recited in claim 4 which this claim is depended therefrom. It appears that they are the same.

Claim 15: It is unclear what the different between "an ink jet head" (page 48, line 20) recited in this claim and the one recited in claim 2. Similarly, it is unclear

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what the difference between an elastic cap and a liquid absorbing member recited in this claim and the one recited in claim 2.

The remaining claims are rejected due to their dependency.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art (AAPA) in view of Terasawa et al (US 6,097,407).

AAPA discloses all features of the claimed invention as follows:

- An ink jet head (page 4, line 3) comprising a nozzle (page 4, line 8) communicated with an opening for discharge liquid
- A liquid storing portion (same ink storing space recited on page 4, line 8) for storing the liquid to be supplied to said nozzle

- A liquid introduction portion (same as ink introduction port recited on page 4, lines 8-9) for introducing the liquid into said liquid storing portion from exterior
- Air is housed in said liquid storing portion (see page 5, line 2) and the liquid is contained at least in said nozzle (see page 4, lines 16-17).

However, AAPA does not disclose the followings:

- A cap unit including an elastic cap and a liquid absorbing member disposed in said elastic cap.

Nevertheless, Terasawa et al. discloses the followings:

- A cap unit including an elastic cap (33) and a liquid absorbing member (38) disposed in said elastic cap.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the cap unit of Terasawa et al in the teaching of AAPA for the purpose of preserving the head for a long period of time with the discharge openings kept in a good condition.

Please note that the functional statement recited after "said liquid introduction portion" (page 45, line 16) does not further define any structure. Apparatus claims must be structurally distinguishable from the prior art (MPEP 2114).

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Hence, the functional language recites in the claims cannot serve to distinguish over the prior nor further limit the claimed apparatus.

11. Claims 2, 7, 8, 9, 10, 11, 15, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art (AAPA) in view of Terasawa et al (US 6,097,407) and Umemura et al (6,250,745).

AAPA discloses all features of the claimed invention as listed above and further including the followings:

- The liquid contained in the nozzles is ink not including color material (page 4, lines 16-17)
- A contact pad (page 2, lines 24+) is provided on an outer surface of the ink jet head

However, AAPA does not disclose the followings:

- A cap unit including a protection member, an elastic cap with an annular rib, and a liquid absorbing member loaded with ink and disposed in said elastic cap.
- The ink jet head having plurality of nozzles, liquid storing portions, and liquid introduction portions.

Nevertheless, Terasawa et al. discloses a cap unit including a protection member (32) an elastic cap (33) with an annular rib, and a liquid absorbing member (38) loaded with ink (column 9, lines 25+) and disposed in said elastic cap.

While, Umemura et al discloses different elements defining an ink jet head. Each individual element is provided in plurality.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the cap unit of Terasawa et al in the teaching of AAPA for the purpose of preserving the head for a long period of time with the discharge openings kept in a good condition.

In addition, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have elements defining the ink jet head of AAPA provided in plurality as taught by Umemura et al for the purpose of providing individual elements for different color ink.

12. Claims 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art (AAPA) in view of Otis et al (US 5,815,182) and Umemura et al (6,250,745).

AAPA discloses all features of the claimed invention except for:

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- Each liquid introduction portion comprises an elastic member in which a slit is formed.
- A communication pipe/insertion portion having a base end diameter greater than a tip end diameter.
- The ink jet head having plurality of nozzles, liquid storing portions, and liquid introduction portions.

However, Otis et al discloses a liquid introduction portion comprises an elastic member (36) in which a slit (40) is formed and a pipe having a base end (20) diameter greater than a tip end (20) diameter.

While, Umemura et al discloses different elements defining an ink jet head. Each individual element is provided in plurality.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the aforementioned features of Otis et al in the liquid introduction portion of AAPA for the purpose of providing means for supplying ink to the recording head.

In addition, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have elements defining the ink jet head of

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AAPA provided in plurality as taught by Umemura et al for the purpose of providing individual elements for different color ink.

13. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art (AAPA) in view of Nakamura (US 6,062,390), Terasawa et al (US 6,097,407) and Umemura et al (6,250,745).

AAPA discloses all features of the claimed invention except for:

- A cap unit including a protection member provided with a positioning portion and a clip-shaped engagement portion and an elastic cap.
- The cap unit also including a liquid absorbing member disposed in said elastic cap.
- The ink jet head having plurality of nozzles, liquid storing portions, and liquid introduction portions.

However, Nakamura discloses a cap unit including a protection member (1) with positioning portion (8, 11) and a clip-shaped engagement portion (illustrated in Figure 3A) and an elastic cap (6) with an annular rib.

While, Terasawa et al discloses a cap unit with a liquid absorbing member (38) disposed in an elastic cap (33).

And, Umemura et al discloses different elements defining an ink jet head. Each individual element is provided in plurality.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the cap unit of Nakamura in the teaching of AAPA for the purpose of protection the recording head. In addition, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a liquid absorbing member as taught by Terasawa et al in the teaching of AAPA as modified for the purpose of retaining humidity so that the recording head can be preserved for a long period of time.

Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have elements defining the ink jet head of AAPA provided in plurality as taught by Umemura et al for the purpose of providing individual elements for different color ink.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Judy Nguyen whose telephone number is (703) 305-7062. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ben Fuller can be reached on (703) 308-0079. The fax phone

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number for the organization where this application or proceeding is assigned is
(703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or
proceeding should be directed to the receptionist whose telephone number is
(703) 308-0956.



Judy Nguyen
Primary Examiner
November 3, 2003